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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,284	03/05/2002	Duncan Roger Harper	10660-070US (10279P1)	5606
7590 Frederick H. Rabin Fish & Richardson P.C. 225 Franklin Street Boston, MA 02110		10/25/2007	EXAMINER METZMAIER, DANIEL S	
			ART UNIT 1796	PAPER NUMBER
			MAIL DATE 10/25/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/091,284

Applicant(s)

HARPER ET AL.

Examiner

Daniel S. Metzmaier

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-20,25-28 and 34-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-20,25-28 and 34-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 17-20, 25-28 and 34-36 are pending.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06 August 2007 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The metes and bounds of applicants claims are indefinite since for materials that meet multiple elements of the broad claim language, it is unclear how much of said material to attribute to each of the claimed components. Clearly the component (b) mono- and polyglyceryl esters overlap the esters of component (d).

Furthermore, the use of diethyl orthophthalate as the solvent and component (d)(III), esters of carboxylic acid containing 6 to 30 carbon atoms, overlap.

Component (d)(III) is an improper alternative grouping since the claim is limiting amines of carboxylic acids containing 6 to 30 carbon atoms with amides, aldehydes, esters

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 17-19, 25-28 and 34-36 are rejected under 35 U.S.C. 103(a) as obvious over Bassam et al. 5,849,264. The claims of Bassam et al. refer to an insecticidal composition in the form of water-in-oil emulsion comprising (a) 2-80% w/w propellant, (b) 0.5-8% w/w of one more emulsifiers selected from di- and tri-sorbitan esters, polyglycerol esters, including fatty alcohol ethoxylates (column 5, line 11), etc., (c) 1-20% w/w of a solvent selected from carboxylic acid (e.g. fatty acids (column 3, lines 65-67), (d) 0.001-5% w/w of a pyrethroid insecticide and (e) water bring the total composition to 100% w/w. Component (d) comprises carboxylic acids and diethyl orthophthalate as well. The solvents of Bassam et al. are selected from fatty acid and dialkyl phthalates. Hence, as long as applicants such fatty acids cannot clearly and unambiguously demonstrate that will not fulfill the conductivity and phthalates criteria of the claims the compositions are deemed to be anticipated by Bassam et al.

Applicants set forth (paragraph [0056] of the original specification) the "compositions of the present invention, when sprayed through conventional aerosol spray heads, form droplets which are imparted with a unipolar charge of at least about $\pm 1 \times 10^{-4}$ C/Kg". Since the compositions are anticipated and their use in conventional aerosol spray heads is disclosed, the methods as claimed are deemed anticipated.

To the extent the claims differ in the functional properties claimed, some variation of the compositions of the reference is disclosed and therefore some variation of the properties would have been expected. Applicants have not shown the properties to be critical to the invention.

7. Claims 17-19, 25-28 and 34-35 are rejected under 35 U.S.C. 103(a) as obvious over Stopper 4,536,323, esp. column 4, line 34 - column 5, line 19, noting also column 3, line 55 - column 4, line 19. Sodium lauryl sulfate in the typical composition in column 4 would fulfill the conductivity criteria of claim 17 herein.

Applicants set forth (paragraph [0056] of the original specification) the "compositions of the present invention, when sprayed through conventional aerosol spray heads, form droplets which are imparted with a unipolar charge of at least about $\pm 1 \times 10^{-4}$ C/Kg". Since the compositions are anticipated and their use in conventional aerosol spray heads is disclosed, the methods as claimed are deemed anticipated.

To the extent Stopper differs from the claims in the functional properties set forth in the claims, variation of the composition concentrations of the reference emulsifier mixture exemplified, the claims set forth concentrations of the emulsifier package of about 1.0 % w/w of nonionic surfactant and a anionic surfactant of 10 % w/w based on the nonionic surfactants. It is therefore concluded that some variation of the properties would have been expected. While stile achieving the unipolar charged particles since the materials have said emulsifiers at or about said claimed concentrations.

It is noted that applicants originally disclose the unipolar effect occurs with compositions having as much as about 10 % w/w nonionic surfactant and up to about 80 % w/w/ of anionic polar surfactant (see original paragraph [0009]). The issue is whether the modifier "about" would include the concentrations of about 3 % w/w/ mixed emulsifier disclosed (claim 1) in Stopper. Applicants have not shown the more limited

Art Unit: 1796

concentrations to be critical since the applicants originally disclose the same effect is achieved at higher and lower concentrations of the nonionic and anionic surfactants.

To the extent said concentrations do not at least overlap at their endpoints, said concentrations would have been obvious as a point of law. See also MPEP 2144.05(I) wherein it sets forth, "A *prima facie* case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. ***Titanium Metals Corp. of America v. Banner***, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985)."

This is further obvious in view of the level of skill in the art, which it is well known that oil-in-water emulsions have an aqueous external phase and may be further diluted with polar solvents or aqueous phase, which further reduces the flammability of the compositions.

Furthermore, some variation of the surfactants in making microemulsions is to be expected in the art for the advantage of stability. It would have been obvious to vary the concentrations of the components of the Stopper reference for any of the variety of end-use utilities disclosed therein (column 7, lines 32 et seq) including at least cleaning, air fresheners, paint, coating sprays, deicer sprays, and defogger sprays.

Applicants have not shown the properties to be critical to the invention.

8. Claims 17-20, 25-28 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fox et al., WO 99/21659, in view of Stopper 4,536,323, or Bassam et al. 5,849,264.

Fox et al (abstract; page 2, lines 22 et seq; examples and claims) describe an aerosol spray device and method of reducing the droplet size of a composition sprayed from such device. The preferred aerosol composition comprises an oil phase, an aqueous phase, a surfactant and a compressed propellant (page 8, lines 4-12). A charge is imparted to the liquid droplets solely by the interaction between the liquid within the aerosol spray device and the spray device itself as the liquid is sprayed therefrom (page 2, line 22 – page 3, line 22).

Fox et al differs in the particular emulsion compositions employed in the aerosol methods and the spray device of claims 21-24.

Bassam et al. refer to an insecticidal composition in the form of water-in-oil emulsion comprising (a) 2-80% w/w propellant, (b) 0.5-8% w/w of one more emulsifiers selected from di- and tri-sorbitan esters, polyglycerol esters, etc., (c) 1-20% w/w of a solvent selected from carboxylic acid (e.g. fatty acids column 3, lines 65-67), (d) 0.001-5% w/w of a pyrethroid insecticide and (e) water bring the total composition to 100% w/w. Component (d) comprises carboxylic acids and diethyl orthophthalate as well.

Stopper, 4,536,323, esp. column 4, line 34 - column 5, line 19, noting also column 3, line 55 - column 4, line 19. Sodium lauryl sulfate in the typical composition in column 4 would fulfill the conductivity criteria of claim 17 herein.

Fox et al (page 7, line 32 et seq) discloses that changes in the product formulation can affect the charging levels. Fox et al further teaches that an emulsion of an immiscible hydrocarbon and water will carry a higher charge to mass ratio when sprayed from the aerosol device than either water or hydrocarbon alone.

These references are combinable because they teach aerosols and emulsions employed in said aerosols. It would have been obvious to one of ordinary skill in the art at the time of applicants' invention to employ the compositions of Bassam et al or Stopper in the aerosol devices of Fox et al (see page 4, lines 29 et seq) for the advantage of imparting a charge to said aerosol droplets, which has the effect of said droplets repelling each other, increased spread, and smaller droplet size of the aerosol.

Applicants set forth (paragraph [0056] of the original specification) the "compositions of the present invention, when sprayed through conventional aerosol spray heads, form droplets which are imparted with a unipolar charge of at least about $\pm 1 \times 10^{-4}$ C/Kg". Since the compositions are anticipated and their use in conventional aerosol spray heads is disclosed, the methods as claimed are deemed anticipated.

To the extent the claims differ in the functional properties claimed, some variation of the compositions of the reference is disclosed and therefore some variation of the properties would have been expected. Applicants have not shown the properties to be critical to the invention.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422

Art Unit: 1796

F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 17-20, 25-28 and 34-36 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-11 of copending Application No. 11/638,231. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claimed invention to the packaged composition was examined in this application without restriction and is deemed to be obvious in view of the instant claimed invention and both sets of claims are based on the same disclosures.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

11. Applicant's arguments filed 06 August 2007 have been fully considered but they are not persuasive.

12. Applicants (pages 6 and 7) assert that it is the claims and not the disclosure that must distinguish over the prior art. This statement is agreed for anticipation but the claims are read in light of the disclosure which sets forth that the concentration of the emulsifiers may be varied which is consistent with practice that is well known in the art. Any variation of the emulsifiers would have been within the ordinary skill level in the art.

13. Applicants (page 7) assert: "Applicants' invention is that, by careful selection of the components of the composition contained in the aerosol spray device, one can enhance the charge imparted to the liquid droplets without requiring any special features in the construction of the aerosol spray head." Applicants' claims are not commensurate in scope with this statement.

14. Applicants (page 7) further assert there is nothing in the Fox reference that would have lead one skilled in the art to employ the Bassam et al or Stopper et al compositions therein. This has not been deemed persuasive since the references are combinable because they teach aerosols and emulsions employed in said aerosols. It is reasonable to expected the composition of Bassam et al or Stopper et al to function in the Fox apparatus.

15. Applicants (pages 7 and 8) assert the claims have been amended in response to the examiner's comments in paragraphs 7 and 8 of the last Official Office Action mailed 03 April 2007. Applicants further point out that component (d) is now required at a concentration of 0.1 to 10% of the nonionic surfactant. This has not been deemed persuasive for the following reasons. While said concentrations are asserted to be different from those disclosed in the Bassam et al reference, applicants have not shown said difference to be critical to the invention. Each of the claimed emulsifiers is well known in the prior art individually for the function of dispersing and/or emulsifying.

The combination thereof would have been obvious to those having ordinary skill in the art for said function of emulsifying with an expectation of success in the absence of a showing of criticality and/or unexpected results.

Furthermore, applicants' assertion that the concentration of (d) based on (b) claimed distinguishes the reference. Applicants' claimed concentrations have been considered. As noted in the above rejection, the concentrations read on the compositions since the components (b) and (d) overlap. The mono- and polyglycerol esters of component (b) reads on (d)(III) esters of carboxylic acids. The reference disclosure of diethyl orthophthalate is further incidental disclosure that the solvents and component (d)(III), esters of carboxylic acid containing 6 to 30 carbon atoms, overlap.

Lastly and since species recited as component (b) and (d) are disclosed as emulsifiers, said emulsifiers would have been expected to function in all ratios and component ratios within the broader teaching of the active emulsifier concentrations disclosed in the Bassam et al reference. The use of combined emulsifiers are notoriously well known in the emulsion art and would have been expected to form the claimed emulsions in view of the Bassam et al reference. While the Bassam et al reference discloses preferred embodiments for the emulsifiers, said teachings of preferred embodiments do not exclude the use of less preferred combinations in the absence of further evidence, e.g., criticality.

16. Applicants (pages 7 and 8) assert there is no motivation to employ the Bassam et al or the Stopper et al references into the Fox et al reference package. Applicants direct attention to some of the portion of Fox et al cited by the examiner, i.e., page 2, lines 22 to page 3, lines 22. This has not been deemed persuasive for the following reasons.

All disclosures in a reference must be considered for what it fairly teaches those of ordinary skill in the art, not just preferred embodiments or specific working examples.

In re Boe, 355 F2d 961, 148 USPQ 507, (CCPA, 1966). *In re Chapman*, 357 F2d 418, 148 USPQ 711, (CCPA, 1966). *In re Mills*, 470 F2d 649, 176 USPQ 196, (CCPA, 1972). In particular, Fox et al specifically teaches (page 7, line 32 et seq) discloses that changes in the product formulation can affect the charging levels. Fox et al further teaches that an emulsion of an immiscible hydrocarbon and water will carry a higher charge to mass ratio when sprayed from the aerosol device than either water or hydrocarbon alone.

The rejections are deemed proper and have been maintained.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on Monday to Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 1796

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, reading "Daniel S. Metzmaier". The signature is fluid and cursive, with the first name "Daniel" and last name "Metzmaier" clearly legible.

Daniel S. Metzmaier
Primary Examiner
Art Unit 1796

DSM